



GLENDALE MUNICIPAL AIRPORT NOISE ABATEMENT PROGRAM

Frequently Asked Questions

Q: What is the City of Glendale doing to decrease noise and overflights over residential areas?

A: The City of Glendale has developed the Glendale Municipal Airport's Noise Abatement Program to help minimize noise impacts—to the greatest extent possible—over residential areas in the vicinity of the Airport. Unfortunately, the proximity of the residential areas surrounding the Airport makes some level of exposure to aircraft noise or overflights inevitable; however, the City is striving to minimize this noise exposure as much as possible, while still serving the needs of the Airport tenants and users.

Q: What is the Glendale Municipal Airport Noise Abatement Program?

A: The Noise Abatement Program is a voluntary program that provides recommendations to the aircraft operators. The program encourages the following recommendations:

- 1) Avoid low-level flight activity over residential areas, No Curfew;
- 2) Avoid noise-sensitive areas north and south, as practical;
- 3) Utilize Aircraft Owners and Pilots Association (AOPA) and National Business Aircraft Association (NBAA) recommended quiet flying procedures;
- 4) Local traffic pattern departures from Runway 01 turn right to 040 degree heading at the end of the runway; fly short crosswind leg; turn downwind leg west of 99th Avenue;
- 5) Visual Flight Rules (VFR) departures Runway 01 turn right to 040 degree heading at the end of the runway; maintain heading until aircraft is over curve in expressway, south of Olive Avenue;
- 6) Local traffic pattern departures from Runway 01 turn right to 020 degree heading at the end of the runway; fly short crosswind leg; turn downwind leg west of 99th Avenue;
- 7) Visual Flight Rules (VFR) departures Runway 01 turn right to 020 degree heading at the end of the runway; maintain heading until aircraft is over curve in expressway, south of Olive Avenue;
- 8) VFR departures Runway 19 maintain runway heading until Indian School Road before turning east or northeast. Make turns shortly after passing Indian School Road to avoid potential conflicts with traffic at Phoenix Goodyear Airport;
- 9) Touch-and-go landings are discouraged between the hours of 10:00 pm and 6:00 am.
- 10) Safety always supersedes noise abatement procedures.

Q: What are the three objectives of the Glendale Municipal Airport Noise Abatement Program?

A: The three objectives of the Glendale Municipal Airport Noise Abatement Program are to:
1) reduce the noise-impacted population in the study area, within practical cost constraints; 2) minimize, where practical, the exposure of the study area population to the noise events of very high levels. These high levels, which are often manifested by single-event noise levels outside the DNL noise contours (24-hour average sound levels in decibels), can be an

annoyance to airport neighbors and warrant attention; and 3) Ensure maximum compatibility of existing and future land uses with noise generated by aircraft using the airport.

Q: Why can't the aircraft always fly over the open areas like the river bed around the airport instead of over residential neighborhoods?

A: Specific flight paths are determined based on several factors, including weather conditions, the direction of the prevailing wind and air traffic management by the airport traffic control tower. Because safety is the #1 priority, it is sometimes necessary for aircraft to fly over residential areas in order to maintain a safe distance between any airborne aircraft.

When aircraft are in the Glendale Municipal Airport flight pattern for touch and gos, the noise abatement procedure of the right turn to 020 or 040 heading cannot always be done. This right turn will cause a conflict for the safe separation of aircraft.

Q: Can the City keep airplanes from flying over my neighborhood? Can the aircraft be diverted away from where I live so that they don't fly over my house?

A: The Federal Aviation Administration (FAA) Contract Air Traffic Control Tower manages the airspace at and around the airport. Because the total amount of airspace near the Airport is limited, the FAA has little choice but to establish flight patterns based upon nationally used standards to and from Glendale. These flights sometimes are over homes located in the vicinity of the airport. Once a pilot communicates with the FAA Air Traffic Control Tower and leaves the runway pavement, the aircraft is under the authority of the FAA and the pilot. However, through feedback received from the community, the City is monitoring noise-sensitive areas and working with the air traffic control tower and pilots to try to avoid flying over these areas as much as possible, consistent with national air traffic control standards and *as long as safety is not jeopardized*.

Although it is impossible to completely shield residents from aircraft noise, the Airport has attempted to address this issue by issuing several recommendations aimed at reducing the effects of noise on neighborhoods.

These and other recommendations are all aimed at reducing the effect on noise on area residents. Additional potential noise abatement measures are constantly being evaluated for use at the Glendale Municipal Airport.

Any flight restrictions must be approved by the FAA. The FAA will review any flight restrictions to ensure that the restrictions are reasonable, nondiscriminatory and do not interfere with interstate commerce or violate a contractual agreement with the FAA that was agreed to as a condition of receiving federal aid.

Q: Can the City limit the kinds of aircraft that fly into and out of Glendale? Can the City limit the times when aircraft can land and take off from the airport? Why can't the flight schools fly at their home airport?

A: Federal law requires Glendale Municipal Airport to remain open to aircraft 24 hours per

day, 7 days per week on a non-discriminatory basis. This includes both civilian and military aircraft. While the Airport publishes information about the length, width and strength of its runways to all pilots, it is ultimately the pilot's decision whether or not their aircraft can safely land and take off from Glendale. Due to the congestion at the flight schools' home airport, flight schools must travel to other airports for their training. The City cannot prevent the flight schools from using the airport or limit the times or types of aircraft.

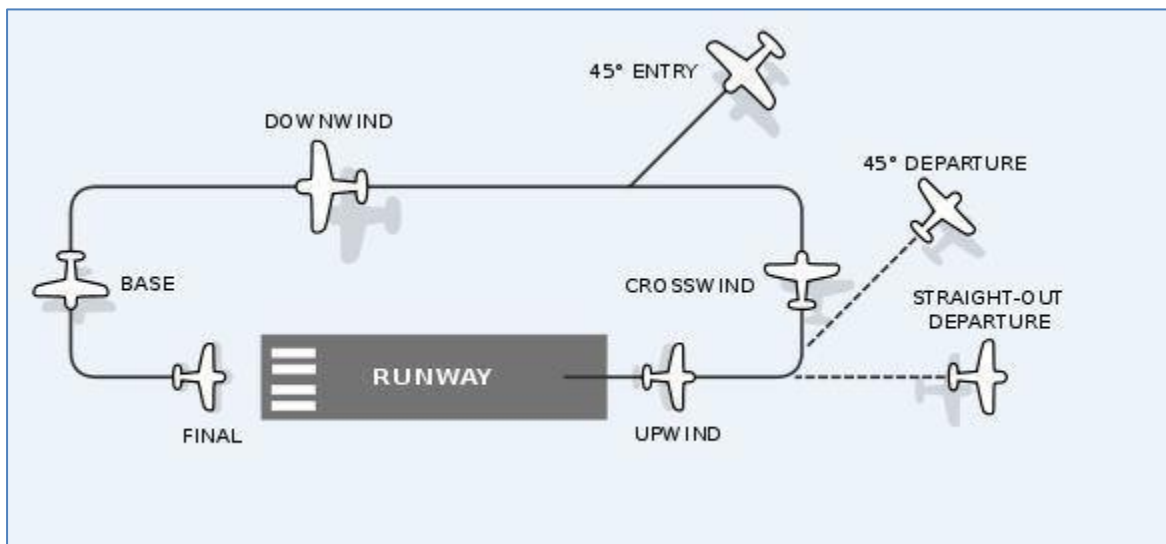
Q: The flight tracks at Phoenix Sky Harbor International Airport have recently changed. Has this change affected the flight tracks out of the Glendale Airport?

A: No. These flight track changes only affect the flights in and out of Sky Harbor. The flight tracks at the Glendale Airport have not changed. Flight tracks are commonly used in arrival and departure procedures for flights under Instrument Flight Rules (IFR). All commercial flights must fly under IFR. Flight tracks are different from the flight patterns.

Q: Has the Airport changed its flight traffic patterns? Is that why I notice increases or decreases in the number of airplanes over my house?

A: The FAA, through the Air Traffic Control Tower located on the Airport, controls the movement of all aircraft on the ground and in the airspace over and around the Airport. The FAA has NOT changed or attempted to change any flight traffic patterns into or out of the Glendale Municipal Airport. The flight patterns may change due to bad weather and/or wind conditions, and any altered patterns are generally used only temporarily until the wind or weather condition subsides.

The following diagram represents a **typical** flight pattern:



The flight pattern at Glendale Airport is different from standard flight patterns due to the vicinity of the tall power lines immediately to the west and Luke Air Force Base traffic further to the west. The Airport flight traffic pattern is always east of the Airport. No Airport flight traffic pattern is west of the Airport. However, due to aircraft traffic around the University of Phoenix stadium, the air traffic control tower will sometimes direct the traffic to the west side.

The flight patterns are not “roads” in the sky. The aircraft will not follow the printed lines precisely.

Ideally, the flight pattern would be a rectangle. However, several factors will alter the shape of the flight pattern. Winds will affect all aircraft in the air. The wind will tend to push the aircraft either closer or farther from the runway. Also, as more aircraft join the flight pattern, the pattern will be extended or expanded, usually by lengthening. This is to maintain safe separation between aircraft. The different types of aircraft, with different speeds, will change the size of the traffic pattern.

Q: What are IFR and VFR?

A: IFR is a set of regulations defined as Instrument Flight Rules. IFR flight is usually flown under poor visibility and navigation is done by aircraft instruments. The pilot of the aircraft must be IFR rated to operate in IFR conditions. Commercial airliners must operate under IFR. Air Traffic Control (ATC) separates the IFR aircraft from objects and other aircraft throughout the flight. IFR flights require ATC clearance for each part of the flight.

VFR is the other set of regulations defined as Visual Flight Rules. VFR flights are flown in clear weather conditions. Most pilot training flights are flown under VFR for it is generally simpler. VFR allows pilots to go where they want to go, when they want and they determine where to fly subject to the FAA regulations. The pilot of the aircraft is responsible for the separation between the aircraft and other objects. It is commonly known as “see and avoid.” Most of the flights out of Glendale Municipal Airport are under VFR.

Q: I looked at the Public Vue on the Phoenix Sky Harbor International Airport website and see that the flying aircraft over my house is shown as “Unknown.” Why don’t they post their tail number?

A: The Public Vue information is derived from the FAA radar data and other sources. Due to the airspace requirements in the Phoenix Metro area, the use of the aircraft radio known as a transponder is required for all flights. The new transponders will transmit the tail number, but older transponders do not have that capability. There is an exception for the use of transponders which will only apply to antique aircraft. Airline flight identification information is mostly obtained from the Official Airline Guide and from the transponder.

Q: What has the City already done to mitigate the effects of noise on area residents?

A: The City’s implementation role is focused on communication. By continually communicating our recommended noise abatement practices with the appropriate parties, the City is better able to influence cultural changes that will impact the way pilots fly to and from the Glendale Airport. Our outreach efforts have been all encompassing and includes contact at various levels of the FAA, with Glendale-based pilots and itinerant pilots (pilots not based here), flight training schools, and aviation businesses to help educate and make them aware of our noise abatement program goals. This is a continuous, ongoing effort.

Outreach has been accomplished via the Airport webpage, meetings, workshops, written correspondence and other materials.

Q: Why doesn't the City of Glendale have curfews or rules similar to those at other airports such as Scottsdale, Arizona or Burbank, California?

A: In 1990, Congress passed the *Airport Noise and Capacity Act* that made it extremely difficult for airports to initiate curfews or to impose any kind of noise or airport access restrictions. Airports such as Burbank and Scottsdale that had curfews in place before the Act was passed were allowed to keep them. No restrictions existed at the Glendale Airport prior to 1990.

Q: Can the City fine "problem" pilots? Can the City prevent them from using the Airport?

A: Since the Airport's noise abatement program is voluntary, the City itself cannot fine or prohibit a pilot from flying into and out of the Airport. Because safety is the #1 priority, pilots are sometimes unable to comply with the recommended noise abatement practices for safety of flight. This will include reasons such as aircraft weight or muggy and hot weather conditions which make takeoffs longer and less efficient.

Q: How does the weather and season affect aircraft noise?

A: During the hotter summer months, an aircraft's ability to gain altitude quickly decreases due to the heat. They stay lower for longer, and more power is required for the aircraft to gain altitude. A low cloud cover will also create more noise because the sound resonates back to the ground instead of dispersing throughout the atmosphere. As air density becomes thicker and the air is cooler and dryer, the air molecules are closer together, resulting in the sound conducting better, traveling longer distances and appearing louder to the common ear. Individuals will usually notice an increase in aircraft noise during cooler months (spring and fall) when windows are more likely to be open and people are outside.

Q: When does an aircraft make the most noise?

A: Most noise comments originate from aircraft operations during the initial phase of their take-off or during the final phase of landing. Since individuals have a wide range of sensitivity to noise, the extent of noise impact varies greatly among individuals. The noise level perceived at any given point on the ground can vary widely based on a number of factors. These include, but are not limited to:

- **Aircraft type and size.** A common misconception is that the larger the aircraft, the louder they become; however, this is not necessarily the case. As a whole, Glendale receives most of its noise complaints from light aircraft and low-flying helicopters. While there have been a growing number of corporate jets using the Airport, many of these aircraft that have been built recently—in the last 10 to 15 years—have state-of-

the-art engines which are designed to greatly limit their noise output. Military aircraft and helicopters are designed to a different standard than civilian aircraft.

- **Aircraft load.** Passenger and aviation fuel loads can affect noise levels. Heavier loaded aircraft generally climb at a slower rate and require the use of more engine power, increasing the noise exposure to homes near the airport.
- **Weather.** Weather can also affect noise levels. Dense, low cloud cover may reflect noise back to the ground, producing an "echo" effect which may intensify noise levels.
- **Time of Day.** Aircraft operations during nighttime or early morning hours may have a greater noise impact due to the time of day. People are often more sensitive to noise during normal "sleeping" hours. The same noise level and operation may actually seem worse during these hours due to this increased sensitivity. Aircraft noise may also appear to be louder because of the absence of other sounds heard throughout the day from things such as automobiles, trucks, motorcycles, lawn mowers, televisions and loud music.
- **Season.** Aircraft noise is often a greater nuisance during seasons when residents leave their doors and windows open. During the summer and winter months, homes usually have the doors and windows closed, limiting the exposure to outside noise sources. During the spring and fall, when temperatures are more moderate, residents often have the doors and windows of their home open. During these times, people may be more sensitive to outside noise.
- **Human Factors.** Noise affects different people in different ways. Some are more sensitive to noise in general. Different people may be more or less sensitive to certain types or sources of noise. Individuals living in the same neighborhood or even within the same home may also have different levels of sensitivity to noise.

Q: How can I submit a Noise Complaint Form?

A: The City provides residents the opportunity to file noise and safety complaints by phone at 623-930-2188 or online at the Airport's website. Airport staff will review all comments received and perform the necessary follow-up based upon the findings of the review.

Q: What happens when I submit a Noise Compliant Form?

A: All comments are entered into a file and correlated with a particular aircraft event, whenever possible. Currently, the City has limited resources to identify aircraft and specifics related to a reported incident (aircraft identification number, runway in use, aircraft operation-taking-off, landing, overflight); however, the City is exploring options to increase our capabilities in order to help us better understand and identify the circumstances associated with a particular noise or safety event including aircraft flight path and altitude. Until we have better technology, we must rely heavily on the information provided by residents when they make incident reports. As such, the more accurate the information submitted to us during an incident report, the better chance we have of following-up and addressing a complaint. Reports submitted to the City assist us in monitoring the effectiveness of the Noise Abatement Program and, if necessary, considering additional solutions to noise concerns. The comments also assist the City in educating pilots and

aviation businesses. Please note that all reports made to the City are subject to public inspection through the Freedom of Information Act (FOIA).

Noise complaints will never eliminate aircraft noise, but your calls help staff manage our pilot education efforts to assist in minimizing airport noise impacts to the greatest extent possible. Note that while some complaints help identify pilots that could have used better noise abatement practices, many complaints are received for operations that produce noise events, but which are fully in compliance with FAA air traffic rules and the Airport's recommended noise abatement practices.

Q: What good does it do to call-in a Noise Complaint Form when the noise abatement program is voluntary?

A: Pilot education is a major part of our noise abatement program and the complaints assist the Airport in this effort. The complaints allow the Airport to see trends which assists staff in enhancing the education program.

Q: I am not a resident of Glendale. Do you care about my complaint?

A: Yes. The City cares about all area residents and appreciates the well-being and safety of our surrounding community. That is why staff is doing everything within its control to make sure that aircraft have the opportunity to take-off and land safely from the Airport. The City collects all information in order to track noise issues.

Q: Who is responsible for aircraft noise?

A: The Glendale Municipal Airport is part of the National Air Transportation System and plays a vital role in the local, regional, and national aviation system. However, many different organizations share responsibility for various elements of a noise abatement program, and airport operators are just one of many responsible parties. The various participants in the aircraft noise abatement issues and their roles include:

1. The Federal Government

The National Air Transportation System exists primarily through the creation of federal legislation. *The Federal Aviation Act of 1958* established the management of navigable airspace as a federal responsibility. Every facet of it is governed by the FAA. They exercise control of aircraft noise through:

- **Establishing aircraft noise emissions standards.** Aircraft are certified by the FAA for various levels of noise emissions. All newly manufactured jet aircraft are certified to quiet "Stage 3" standards; however, some noisier "Stage 2" business jet aircraft are still permitted to operate without mandatory noise-reducing "hush kits," however, these aircraft are quickly diminishing from use. There is an ongoing international dialog about developing a new, quieter "Stage 4" standard. Military aircraft are also exempt from these federal regulations.
- **Managing the Air Traffic Control System.** The FAA has been tasked as the agency responsible for operating the airspace safely and efficiently.

- **Noise Compatibility Studies.** The FAA oversees, reviews, and either approves or disapproves FAR Part 150 airport noise compatibility studies that are conducted by airports. It also approves or disapproves airports' decisions to implement aircraft noise regulations. The noise studies do not make the noise go away, but provide procedures to manage and minimize the noise impacts.
 - **Licensing of Pilots & Enforcement of Flight Regulations.** Pilots are trained in procedures that are intended to be uniform at airports across the country. Noise abatement awareness is part of the required pilot training curriculum. The FAA Flight Standards District Office (FSDO), located in Scottsdale, regulates this activity and enforces pilot compliance with air traffic control instructions and flight regulations.
2. **State of Arizona.** State regulation of aircraft in flight is preempted by federal law. However, State regulations affect disclosure of aircraft flight paths and noise. Arizona Revised Statute 28-8486, Public Airport Disclosure requires the recording of public airport disclosure maps. The maps provide information to prospective homebuyers, as well as current homeowners, regarding flight patterns at or near an airport.
 3. **Local Government (i.e., the City of Glendale, Maricopa County).** Local governments have authority that governs land use planning, zoning and other local building codes. Prior to 1990, some local governments passed regulations on local aircraft operations at airports. However, Congress severely limited local governments from enacting any new mandatory regulations by passing the *Airport Noise and Capacity Act of 1990* (ANCA). This has resulted in only a small number of airports having local "grandfathered" mandatory noise regulations that were in place prior to 1990.
 4. **Airport Operators.** Airport operators (in this case the City of Glendale) are responsible for the planning, development and maintenance of the airport.
 5. **Pilots.** Pilots are responsible for operating their aircraft safely, while complying with all FAA rules governing flight and air traffic control instructions. National, state and local pilot associations actively encourage their members to use noise abatement procedures whenever possible, consistent with safety.
 6. **Residents.** The Federal Aviation Noise Abatement Policy 2000 states that "current and prospective residents in areas surrounding airports should seek to understand the aircraft noise problem and what steps can and cannot be taken to minimize its effects. Prospective home buyers should research the location of airports and flight paths and determine if aircraft noise would affect their quality of life."

Q: Where can I find a copy of the Airport Disclosure Map?

A: The City has recorded a map of the Glendale Municipal Airport Traffic Pattern Airspace with the Maricopa County Recorder's Office. Recorded noise disclosure maps for Glendale Airport and other Arizona airports may be viewed at the Public Airport Maps section of the Arizona Department of Real Estate's website <http://www.re.state.az.us/airportmaps/publicairports.aspx>.

Airport noise contours indicate what areas around the airport experience aircraft noise as

measured by the FAA standards. The federal guidelines for residential compliance with aircraft noise are an average of 65 decibels or lower during a 24 hour period.

Q: Who can do something about low-flying planes? My concern really isn't noise; it's safety. Who should I contact?

A: Specific safety comments should be filed with the FAA's Flight Standards District Office located in Scottsdale at (480) 419-0111. This office investigates low-flying or potentially unsafe flight incidents.

Q: What are the rules regarding how low an aircraft can fly over a residential area? Is there a legal minimum altitude that airplanes can fly over residential areas?

A: Aircraft altitude is established by Title 14, Code of Federal Regulations Section 91.119. It is important to be aware of two aspects of this regulation which address minimum safe altitudes. First, most aircraft operating in the vicinity of the Airport are in the process of landing or taking off. In these cases, this regulation does not apply. Second, helicopters are exempted from this federal regulation. Helicopters are not subject to the minimum altitude restrictions required of fixed-wing aircraft provided that the operation of the helicopter is conducted safely.

The minimum traffic pattern altitudes for Glendale Airport are:

- Light Aircraft - All Runways 2,100 Mean Sea Level (MSL) (1,000 Above Ground Level - AGL).
- Large Aircraft, all turbo prop/jet and high performance aircraft – All Runways 2,600 MSL (1500 AGL).

Q: What are the Airport's hours of operation?

A: Federal law requires Glendale to remain open to the public 24 hours per day, 7 days per week on a non-discriminatory basis. This includes both civilian and military aircraft. The airport may close for repair or maintenance. The air traffic control tower is open weekdays from 6:00 a.m. to 10:00 p.m. and weekends from 7:00 a.m. to 7:30 p.m. When the tower closes for the night, pilots are responsible for communicating directly with each other on a common published radio frequency while flying and taxiing their aircraft.

The City requests pilots avoid conducting touch-and-go operations between the hours of 10:00 pm and 6:00 am to the fullest extent possible. Because of flight training that occurs at the Airport, there will be late night flight training that does occur at times.

Q: How busy is the airport? How is the level of activity at the Airport measured?

A: Activity levels at airports are measured by the FAA based upon the number of aircraft operations in and above the airport area. An operation is defined as one takeoff, one landing or aircraft flying through Glendale's airspace, as defined by the FAA. In 2014, the Airport experienced over 65,053 aircraft and helicopter operations which ranked Glendale as the 12th busiest towered airport in Arizona.

Q: What are the City's development plans for Glendale? How big will the Airport grow?

A: The City completed and approved an update to the Airport Master Plan in 2009. The Airport Master Plan is the guiding document used by the City to plan for future growth of the Airport in conjunction with other City plans for the areas surrounding the airport. The 2009 Airport Master Plan is available for review on the Airport website at: <http://www.glendaleaz.com/airport/Documents.cfm>

Q: Why does the airport need the federal and state grant funds?

A: Most capital improvements at the Airport are costly. The City is not in a position to fund all of these improvements itself and, therefore, must seek financial assistance from the FAA and the State to design and construct improvements that are often safety-related.

Q: What role does the Glendale Municipal Airport play in the community?

A: The Airport is essential to the City's daily commerce and connects residents and businesses to state, regional, national and international markets. Glendale Airport's tenants and users, surrounding businesses and visitors contributed an estimated \$37.4 million of economic impact and 290 jobs in 2012 according to an ADOT study. The airport plays an important part in attracting and sustaining economic growth and development in the area. Many companies consider the adequacy and efficiency of airport facilities when they are establishing, relocating or expanding their business operations.